♻EPA

Beat the Clock
Preparing Tribal Waste Management for the Next Millennium

At 12:01 on the first morning of the year 2000 (Y2K), many computer systems and microchips could malfunction or produce incorrect information simply because the date has changed. While you don't often hear "tribal waste management systems" alongside banking, telecommunications, transportation, and utilities in the list of sectors vulnerable to the Y2K computing problem, they have the potential for disruptions that could have far-reaching consequences. Y2K problems can affect all aspects of a tribe's waste management, from transporting to recycling or landfilling waste.

Y2K problems could negatively affect tribal environmental systems as we start the next century. They could result in component and process failures, service interruptions, and environmental releases. Even though most waste management systems might not employ date-sensitive monitoring and control systems, it's important to confirm this fact. Office and waste management equipment at your site with computer- or microchip-controlled systems might include the following:

- Accounting systems
- Telecommunications equipment (e.g., telephones, answering machines, fax machines)

What is the millennium bug or Y2K problem?

Years ago, when computers had limited memory and storage space, programmers expressed the date with the last two digits (e.g., '98' instead of 1998). While this programming method initially helped reduce space and operating costs, it could cause problems for date-sensitive operations on January 1, 2000. With this two-digit format, the years starting with 2000 become indistinguishable from the years 1900 and beyond. As a result of this ambiguity, computer systems that use dates to perform calculations, comparisons, or sorting can crash, operate erroneously, or create corrupt data. Similarly, equipment that contains a microprocessor chip such as facility equipment, meters, emergency vehicles, or communication equipment can have problems.

- Ground-water monitoring systems
- Emergency response and communication systems
- Recordkeeping, reporting, and tracking systems
- Landfill gas flares
- Automated leak detection devices
- Analytical laboratory equipment

WASTE MANAGEMENT
IN INDIAN COUNTRY

How to Prepare for Y2K

While most reasonable people hope the Y2K dooms-day scenarios never happen, they also realize it's wiser to prepare for the possibility of disruptions and system errors. Here are some suggested steps for checking specific components of your system for Y2K readiness:

- **Discuss**. Talk with tribal leaders to educate them about Y2K issues and gain their support.

- **Designate**. Identify a staff member or a committee of staff members to take charge of the assessment. Your technical support staff are ideal candidates, as are employees who originally installed or implemented components of your computer system.

- **Assess**. Check components that could be vulnerable to Y2K disruption. Equipment might include telecommunications systems, automated process control systems, tracking software, or monitoring equipment run by embedded chips. Recently purchased equipment might be Y2K ready. Check with your supplier, installer, or equipment manufacturer.

- **Prioritize**. Prioritize the risks of each potential threat. What are the financial and other costs if you don't correct the problem?

- **Repair**. Correct the problems in order of priority in an organized and efficient manner.

- **Test**. Conduct a test of Y2K-amended items that are critical to environmental safety. If feasible, conduct your test as a simulation or on a very small scale to avoid disruption of current operations.

- **Plan for contingencies**. Develop contingency plans to resolve problems quickly if they do occur.

EPA has indicated that Y2K problems will not excuse noncompliance with regulations. To encourage prompt testing of computer-related equipment and ensure that environmental compliance is not impaired, EPA intends to waive 100 percent of civil penalties and to recommend against criminal prosecution for environmental violations caused by tests to identify and eliminate Y2K-related malfunctions.
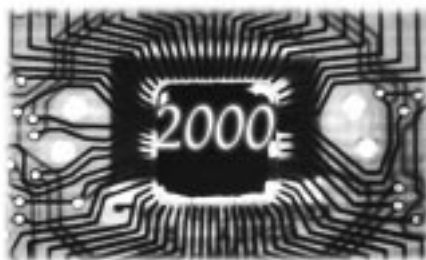
Don't Forget to Consider Suppliers, Vendors, and Contractors

Don't forget that Y2K-readiness on the part of key suppliers, vendors, and contractors could become your problem too. When planning a Y2K evaluation, consider the following:

- Companies who manage your waste

- Vendors and suppliers (e.g., of lab supplies, containers, or computer software)

- Waste transporters

- Loading and distribution systems (e.g., fleet and route management and maintenance, collection, and scales)

- External financial and insurance programs

- Communications providers

- Utilities systems (e.g., electricity, natural gas, and water)

Ask these companies if their equipment has been tested for the Y2K problem.

Where to Turn for Y2K Help

To avoid the worry about what could happen as the new year begins, visit the following Web sites for up-to-date information on Y2K:

- U.S. Environmental Protection Agency (EPA) Waste Management and Y2K <www.epa.gov/epaoswer/osw/y2k/y2k.htm>

- EPA Year 2000 Web site <www.epa.gov/year2000>

- General Services Administration's Year 2000 Information Directories <www.itpolicy.gsa.gov/mks/yr2000/y2khome.htm>

- Indian Health Service's Year 2000 Project <www2.ihs.gov/Y2K/index.asp>

- National Institute of Standards and Technology's Year 2000 Web site <www.nist.gov/y2k>

- Small Business Administration's Year 2000 Web site <www.sba.gov/y2k/indexprob.html>

- Year 2000 Information Center <www.year2000.com>